

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

Claims:

1. (Previously presented) A method for the preparation of a supported transition metal catalyst system, the method comprising the steps of:
  - (i) mixing together in a suitable solvent
    - (a) an aluminoxane and
    - (b) an ionic activator having a cation and an anion, wherein the anion has at least one substituent containing a moiety having an active hydrogen,
  - (ii) adding the mixture from step (i) to a support material, and
  - (iii) adding a transition metal compound in a suitable solvent.
2. (Previously presented) The method according to claim 1, wherein the ionic activator is an alkylammonium tris (pentafluorophenyl) (4-hydroxyphenyl) borate.
3. (Previously presented) The method according to claim 1, wherein the aluminoxane is tetraisobutyldialuminoxane.
4. (Previously presented) The method according to claim 2, wherein the molar ratio of the aluminoxane (aluminium) to ionic activator (boron) is in the range 20 : 0.1.
5. (Previously presented) The method according to claim 1, wherein the support material is silica.
6. (Previously presented) The method according to claim 5, wherein the silica is pretreated with an organoaluminium compound.

7. (Previously presented) The method according to claim 6, wherein the organoaluminium compound is triisobutylaluminium.

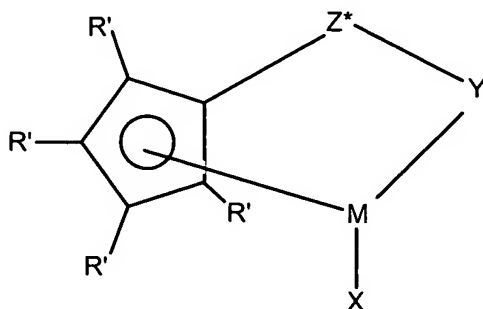
8. (Previously presented) The method according to claim 1, wherein the transition metal compound is a metallocene.

9. (Previously presented) The method according to claim 8, wherein the metallocene has the formula:



wherein Cp is a single cyclopentadienyl or substituted cyclopentadienyl group optionally covalently bonded to M through a substituent, M is a Group VIA metal bound in a  $\eta^5$  bonding mode to the cyclopentadienyl or substituted cyclopentadienyl group, X each occurrence is hydride or a moiety selected from the group consisting of halo, alkyl, aryl, aryloxy, alkoxy, alkoxyalkyl, amidoalkyl, and siloxyalkyl having up to 20 non-hydrogen atoms and neutral Lewis base ligands having up to 20 non-hydrogen atoms or optionally one X together with Cp forms a metallocycle with M and n is dependent upon the valency of the metal.

10. (Previously presented) The method according to claim 8, wherein the metallocene is represented by the general formula:



wherein:

R' each occurrence is independently selected from the group consisting of hydrogen, hydrocarbyl, silyl, germyl, halo, cyano, and combinations thereof, said R' having up to 20 nonhydrogen atoms, and optionally, two R' groups (where R' is not hydrogen, halo or cyano) together form a divalent derivative thereof connected to adjacent positions of the cyclopentadienyl ring to form a fused ring structure;

X is a neutral  $\eta^4$  bonded diene group having up to 30 non-hydrogen atoms, which forms a  $\pi$ -complex with M;

Y is -O-, -S-, -NR<sup>\*</sup>-, or -PR<sup>\*</sup>-,

M is titanium or zirconium in the + 2 formal oxidation state;

Z<sup>\*</sup> is SiR<sup>\*</sup><sub>2</sub>, CR<sup>\*</sup><sub>2</sub>, SiR<sup>\*</sup><sub>2</sub>SIR<sup>\*</sup><sub>2</sub>, CR<sup>\*</sup><sub>2</sub>CR<sup>\*</sup><sub>2</sub>, CR<sup>\*</sup>=CR<sup>\*</sup>, CR<sup>\*</sup><sub>2</sub>SIR<sup>\*</sup><sub>2</sub>, or

GeR<sup>\*</sup><sub>2</sub>, wherein:

R<sup>\*</sup> each occurrence is independently hydrogen, or a member selected from the group consisting of hydrocarbyl, silyl, halogenated alkyl, halogenated aryl, and combinations thereof, said

R<sup>\*</sup> having up to 10 non-hydrogen atoms, and optionally, two R<sup>\*</sup> groups from Z<sup>\*</sup> (when R<sup>\*</sup> is not hydrogen), or an R<sup>\*</sup> group from Z<sup>\*</sup> and an R<sup>\*</sup> group from Y form a ring system.

11. (Previously presented) A process for the polymerisation of olefin monomers, comprising polymerising an olefin monomer selected from the group consisting of (a) ethylene, (b) propylene (c) mixtures of ethylene and propylene and (d) mixtures of (a), (b) or (c) with one or more other alpha-olefins-under polymerisation conditions and in the presence of a supported transition metal catalyst system prepared by:

(i) mixing together in a suitable solvent

(a) an aluminoxane and

- (b) an ionic activator having a cation and an anion, wherein the anion has at least one substituent containing a moiety having an active hydrogen,
  - (ii) adding the mixture from step (i) to a support material, and
  - (iii) adding a transition metal compound in a suitable solvent.
12. (Previously presented) A process for the (co-)polymerization of ethylene, comprising polymerising ethylene or copolymerising ethylene and  $\alpha$ -olefins having from 3 to 10 carbon atoms under polymerisation conditions and in the presence of a supported catalyst system prepared by:
- (i) mixing together in a suitable solvent
    - (a) an aluminoxane and
    - (b) an ionic activator having a cation and an anion, wherein the anion has at least one substituent containing a moiety having an active hydrogen,
  - (ii) adding the mixture from step (i) to a support material, and
  - (iii) adding a transition metal compound in a suitable solvent.
13. (Previously presented) The process according to claim 12, wherein the  $\alpha$ -olefin is 1-butene, 1-hexene, 4-methyl-1-pentene or 1-octene.
14. (Previously presented) The process according to claim 11 or 12, wherein the process is performed in the solution, slurry or gas phase.
15. (Previously presented) The process according to claim 14, wherein the process is performed in a fluidised bed gas phase reactor.
- 16-18. (Cancelled).